

Block et al.

S/N: 10/605,943

REMARKS

Claims 1-24 are pending in the present application. In the Office Action mailed April 5, 2005, the Examiner rejected claims 1-7, 9-11, and 13-24 under 35 U.S.C. §102(b) as being anticipated by Sohval et al. (USP 4,637,040). The Examiner next rejected claims 1, 2, 7, 9, 11, 14, and 15 under 35 U.S.C. §102(b) as being anticipated by Zhou et al. (USP 6,553,096). Claims "8" and 12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Sohval et al. in view of Tang (USP 6,798,865).

Before addressing the rejections in detail, Applicant noted what appear to be two typographical errors in the rejections that should be corrected. First, the Examiner stated, "Claims 1, 2, 7, 9, 11, 14 and 15 are rejected under 35 U.S.C. 102(b)." However, Zhou et al. issued on April 22, 2003, and the present application has a filing date of November 7, 2003. Therefore, since Zhou et al. was published less than one year prior to the filing date of the present invention, Zhou et al. does not qualify as prior art under §102(b). Rather, at most, Zhou et al. may be asserted as prior art under §102(e). As such, Applicant may choose to antedate Zhou et al. by submitting an antedating affidavit and accompanying support. However, as Applicant believes there to be patentable distinctions between the claimed invention and Zhou et al., Applicant has chosen to highlight those distinctions. However, Applicant reserves the right to disqualify Zhou et al. as prior art at a later date.

The second typographical error occurred in the rejection of claims "9 and 12" under §103(a). That is, the Examiner stated, "Claims 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sohval et al....in view of Tang." However, when substantively addressing the rejection, the Examiner referred to "claims 8 and 12." As such, it appears that the Examiner intended the rejection under §103(a) to be directed to claims 8 and 12 and not claims 9 and 12.

Regarding claim 1, the Examiner asserted that Sohval et al. teaches that "the first x-ray source has a distance from a center of the anode disc different than that of the second x-ray source." Specifically, the Examiner cited column 9, lines 32-60 and column 15, line 55 to column 16, lines 13 as teaching such. However, the cited sections are unsupportive of the proffered rejection. Specifically, the cited portion of column 9 merely teaches that the system may include two x-ray tubes. Furthermore, the cited portion of columns 15 and 16 describe Fig. 15 of Sohval et al., which, as will be described, does not teach or suggest that which is called for in claim 1.

Block et al.

S/N: 10/605,943

In particular, Fig. 15 of Sohval et al. clearly shows two "focal spots" 21 and 23. These "focal spots" are shown to be a "first x-ray source" and a "second x-ray source," as called for in claim 1. However, as Fig. 15 of Sohval et al. clearly shows, the "focal spots" 21 and 23, or first and second "x-ray sources", are not positioned such that "the first x-ray source has a distance from a center of the anode disc different than that of the second x-ray source," as called for in claim 1. Specifically, focal spots 21 and 23 are shown positioned at a common radial position from the center of the anode disc along the beveled portion.

Additionally, the Examiner rejected claim 1 under §102(e) as being anticipated by Zhou et al. Applicant has amended claim 1 to clarify that "the first x-ray source and the second x-ray source are configured to extend radially about the anode disc." Nowhere does Zhou et al. teach or suggest that the x-ray sources may be configured to "extend radially about the anode disc." See Fig. 14 of Zhou et al.

Therefore, for at least these reasons, claim 1 is patentably distinct from the art of record. Accordingly, 2-8 are in condition for allowance at least pursuant to the chain of dependency.

Regarding claim 9, the Examiner rejected claim 9 as anticipated by Sohval et al. and, in the alternative, by Zhou et al. Applicant has amended the claim to clarify that the x-ray tube assembly includes an anode disc and that the plurality of target electrodes are disposed on the anode disc. Furthermore, claim 9 has been amended to clarify that "the plurality of independently controllable electron sources includes a first target electrode at a first radial distance from a center of the anode disc...and a second target electrode at a second radial distance from the center of the anode disc that is different than the first radial distance." As previously addressed, Fig. 15 of Sohval et al. clearly shows that the "electron sources" 21 and 23 are located at the same radial distance from the center of the anode disc. Therefore, Sohval et al. does not teach or suggest that electron sources include "a first target electrode at a first radial distance from a center of the anode disc...and a second target electrode at a second radial distance from the center of the anode disc that is different than the first radial distance," as claimed.

Furthermore, Applicant has amended claim 9 to clarify that the spatial coverage produced by the first target electrode and the second target electrode is "substantially similar." Zhou et al. does not teach or suggest such. Rather, as shown in Fig. 14, the spatial coverage of the first fan beam of x-rays 1410 is substantially different from the spatial coverage of the second fan beam of x-rays 1412.

Therefore, for at least these reasons, claim 9 is patentably distinct from the art of record. Accordingly, 10-17 are in condition for allowance at least pursuant to the chain of dependency.

Block et al.

S/N: 10/605,943

The Examiner then rejected claim 18 as anticipated by Sohval et al. Applicant has amended the claim to clarify that the CT system includes an anode disc positioned within the rotatable gantry and that the "multiple high frequency electromagnetic energy projection sources" are "positioned within the rotatable gantry extending circumferentially about the anode disc and configured to project multiple high frequency electromagnetic energy fan beams toward the subject." As clearly shown in Fig. 15 of Sohval et al., the "multiple high frequency electromagnetic energy projection sources" 21 and 23 do not "extend circumferentially about the anode disc." Rather, the "focal spots" 21 and 23 are discretely limited to a particular spot on the anode disc.

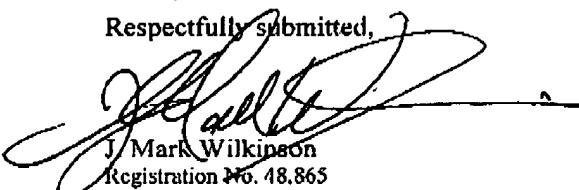
Therefore, for at least this reason, claim 18 is patentably distinct from the art of record. Accordingly, 19-24 are in condition for allowance at least pursuant to the chain of dependency.

As addressed above, the Examiner rejected claims 8 and 12 as unpatentable over Sohval et al. in view of Tang. Applicant respectfully disagrees with the Examiner's interpretation of the art as applied. However, as claims 8 and 12 depend from claims that are believed to be allowable, Applicant does not believe additional remarks with respect to claims 8 and 12 are necessary.

Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1-24.

Applicant appreciates the Examiner's consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,



J. Mark Wilkipson
Registration No. 18,863
Direct Dial 262-376-5016
jmw@zpspatents.com

Dated: 5/31/05
Attorney Docket No.: GEMS8081.186

P.O. ADDRESS:
Ziolkowski Patent Solutions Group, SC
14135 North Cedarburg Road
Mequon, WI 53097-1416
262-376-5170